

IN THE CLAIMS

1. (currently amended) An input system for ~~orientation~~ selecting a point by a user in a visualization of a three-dimensional data set, comprising:

a selection unit to select a reference point relative to the visualization of the three-dimensional data set selected by the user, a direction unit to specify a direction from said reference point to said point being selected by the user in the visualization, and a distance unit to set a distance value from said reference point along said direction to said point being selected in the visualization.

2. (currently amended) The input system according to claim 1 wherein the selection unit comprises a positioning unit to position ~~[[a]]~~ the reference point on a two-dimensional surface and a sensor, the sensor registering a position of the reference point on the two-dimensional surface.

3. (currently amended) The input system according to claim 1 wherein the selection unit comprises a mouse, and a two-dimensional movement of the mouse registered by the mouse corresponding to a movement of the reference point on a two-dimensional surface.

4. (original) The input system according to claim 1 wherein the direction unit comprises a level tiltable in a direction and a sensor, the sensor registering a tilting of the level in the direction.

5. (original) The input system according to claim 1 wherein the direction unit comprises a joystick tiltable in two directions, tilting of the joystick unambiguously specifying two angles for direction specification.

6. (original) The input system according to claim 5 wherein the joystick is structurally connected with a mouse.

7. (original) The input system according to claim 1 wherein the selection unit and the direction unit comprise a pointer wand, and at least one of position and orientation of the pointer wand specifies respectively at least one of the reference point and the direction with respect to the visualization.

8. (original) The input system according to claim 7 wherein at least one of the position and orientation of the pointer wand is measurable by means of ultrasonic elapsed-time measurements.

9. (original) The input system according to claim 8 wherein the pointer wand comprises at least two ultrasonic transmitters, and the input system additionally comprises a receiving unit to receive ultrasonic signals and a synchronization unit to synchronize the ultrasonic transmitters and the receiving unit.

10. (original) The input system according to claim 9 wherein the synchronization unit is connected by a radio connection with the ultrasonic transmitters of the pointer wand.

11. (original) The input system according to claim 8 wherein the pointer wand comprises at least two ultrasonic reflectors, and the input system additionally comprises an ultrasonic transmitter, a receiving unit to receive ultrasonic signals, and a synchronization unit to synchronize an ultrasonic transmitter and a receiving unit.

12. (original) The input system according to claim 11 wherein the ultrasonic reflectors are designed such that they reflect an ultrasonic pulse with at least one of different strength and with characteristic pulse form, depending on a frequency of the ultrasonic pulse.

13. (original) The input system according to claim 1 wherein the distance unit comprises a rotatable small wheel and a sensor to detect rotation.

14. (original) The input system according to claim 1 wherein the input system also comprises a button to actuate a signal.

15: (original) The input system according to claim 1 wherein the input system also comprises an output unit to output a signal that comprises preferred information about at least one of the reference point, the direction and the distance value.

16-46 (cancelled).

47. (currently amended) An input system for selecting a point by a user in a visualization of a three-dimensional data set displayed on a monitor having a display volume virtual surface, comprising:

a selection unit to select a reference point on said display volume virtual surface of said visualization of said three-dimensional data set;

a direction unit to specify a direction from the reference point to the point to be selected in the visualization by the user; and

a distance unit to set a distance value in said direction from said reference point to said point to be selected in the visualization.